

REMARKS

Claims 3, 4, 26, 27, 36-38 and 86 are now pending in this application. Claims 5-12, 14, 16, 17, 19-22, 30, 40-47 and 49 are withdrawn. Claims 1-4, 24-29 and 31-39 are rejected. Claims 1, 2, 5-12, 14, 16, 17, 19-22, 24, 25, 28-35, 39-47 and 49 are cancelled herein. Claims 13, 15, 18, 23, 48 and 50-85 are previously cancelled. New claim 86 is added. Claims 3, 4, 26, 27, 36-38 are amended herein to clarify the invention, to express the invention in alternative wording, to broaden language as deemed appropriate and to address matters of form unrelated to substantive patentability issues.

Only claims drawn to the elected Group I, Specie (1), now remain in the application as a result of cancellation of all claims drawn to non-elected invention and species.

Applicants herein traverse and respectfully request reconsideration of the rejection of the claims cited in the above-referenced Office Action.

Claims 1-4, 24-26, 31-36, 38 and 39 are rejected under 35 U.S.C. § 102(b) as being anticipated by Nakamura (JP 2001-321825 of JP '825). Claims 1, 2, 24, 25, 31-35 and 39 are cancelled herein, rendering their rejections moot. Applicants herein respectfully traverse these rejections as they pertain to remaining claims 3, 4, 26, 36 and 38. "Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, *arranged as in the claim.*" *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221

USPQ 481, 485 (Fed. Cir. 1984) (emphasis added). It is respectfully submitted that the cited reference is deficient with regard to the following.

Claim 26, now in independent form, recites that aging treatment is performed by maintaining the metal body at a temperature which does not turn the metal structure into coarser grain structure in locally lowering the deformation resistance. It is respectfully submitted that no such feature is taught or disclosed in JP '825. Due to such aging treatment, it is possible to process the metal body such that the a mechanical strength and ductility of the metal body can be further improved. This is explained at paragraph [0404] of the published application, stating: "Further, the metal structure of the metal body is not quenched until a normal temperature after performing the plastic forming but the aging treatment is applied to the metal body while holding the metal structure of the metal body at a temperature which prevents the metal growth of the structure. Accordingly, it is possible to further enhance the metal body which obtains the high strength and the high ductility." Applicants respectfully submit that nothing similar in nature is disclosed at paragraph [0022] of JP '825, as is alleged by the Examiner.

In JP'825, the deformation of the low-deformation resistance region is performed exclusively by bending the metal body, and there is no disclosure which describes or suggests the application of aging treatment to the processing of the metal body.

Amended claim 38, now also written in independent form, recites that

rotational motion is imparted to the non-low deformation resistance region in deforming the low deformation resistance region by shearing. Applicants respectfully submit that no such teaching is present in the JP '825 reference.

In JP'825, the deformation of the low-deformation resistance region is performed by merely bending the metal body. There is no disclosure which describes or suggests the deformation of the low-deformation resistance region by rotational motion, which is a process completely different from bending.

Applicants have read paragraph [0029] of JP '825, referred to by the Examiner in alleged support of the rejection of claim 38, and can find nothing which suggests "deforming the low deformation resistance region by shearing including imparting rotational motion to the non-low deformation resistance region" as claimed. The Examiner has not explained where in the cited passage any rotation is imparted to the non-low deformation resistance region.

In accordance with MPEP 706.02(j), when a claim is rejected the Examiner should set forth "the relevant teachings of the prior art relied upon, preferable with reference to the relevant column or page number(s) and line number(s)." In order for the applicant to respond appropriately, it is respectfully requested that, in the event the pending claims are again rejected based on the cited references, the Examiner set forth the relevant teachings in the context of the entire disclosure of the cited reference.

In view of the above, it is respectfully submitted that claims 3, 4, 26, 36 and 38 particularly describe and distinctly claim elements not disclosed in the cited reference. Therefore, reconsideration of the rejections of claims 3, 4, 26, 36 and 38 and their allowance are respectfully requested.

Claims 27-29 are rejected as obvious over JP ‘825 in view of Ozawa (US 6,742,374) under 35 U.S.C. §103(a). Claim 28 is cancelled herein, rendering its rejection moot. The applicants herein respectfully traverse this rejection as pertaining to remaining claim 27.

It is respectfully submitted that the proffered combination of references cannot render the rejected claims obvious because the secondary Ozawa reference does not provide the teaching noted above with respect to the anticipation rejection of parent claim 38 that is absent from the primary JP ‘825 reference. Thus, the combination of prior art references fails to teach or suggest all the claim limitations. Therefore, reconsideration of the rejection of claim 27 and its allowance are respectfully requested.

Claim 37 is rejected as obvious over JP ‘825 in view of McMaster (US 3,534,574) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

Amended claim 37, also now independent, recites that a vibratory motion is

imparted to the non-low deformation resistance region in deforming the low deformation resistance region by shearing. It is respectfully submitted that no such feature is disclosed in JP '825.

In JP'825, the deformation of the low-deformation resistance region is performed by merely bending the metal body. The Office Action admits that there is no disclosure which describes or suggests the deformation of the low-deformation resistance region by utilizing vibratory motion, which is a process completely different from bending.

The secondary McMaster reference is cited for allegedly providing this missing disclosure. However, contrary to the Examiner's position that the disclosure of McMaster allegedly teaches the claimed feature of "deforming the low deformation resistance region by shearing including imparting a vibratory motion to the non-low deformation resistance region," applicants respectfully submit that the sonic vibratory power disclosed in McMaster has nothing to do with the actual deformation process, but rather is limited to controlling heating of metals prior to the hot deformation (see, for example, the abstract). The Examiner even points to this deficiency in the rejection at pages 6-7 of the Office Action, by stating that the vibration is used "in order to form a low deformation resistance region that is subjected to shear by the rollers." (Emphasis added). Thus, applicants submit that the vibration serves no role in the actual deformation, which is instead achieved by solely operation of the rollers.

Thus, it is respectfully submitted that the rejected claim is not obvious in view of the cited references for the reasons stated above. Reconsideration of the rejection of the claim 37 and its allowance are respectfully requested.

It is further noted that the above discussed feature(s) was (were) present in the examined claims as submitted. As such, the present amendments cannot necessitate new grounds for rejection as the present rejections are respectfully submitted as failing to have been established. Accordingly, it is respectfully submitted that a next Office Action cannot be made final.

Claims 1-4, 24-29 and 31-39 are provisionally rejected under the judicially created doctrine of the "obviousness" type double patenting rejection as unpatentable over claims 1-20 of U.S. Patent Application No. 12/002,951. In addition, claims 1-4, 24-29 and 31-39 are provisionally rejected under the judicially created doctrine of the "obviousness" type double patenting rejection as unpatentable over claims 1-20 of U.S. Patent Application No. 12/002,951.

Applicants elect to respond to these provisional rejections upon any issuance of the cited co-pending patent applications.

Claim 86 is added and is submitted as patentable over the cited art of record. Independent claim 86 is drawn to the elected Group I, Specie (1), and recites subject matter directed to deforming the low deformation resistance region by shearing to convert a metal structure of the metal body originally present in the metal structure into a relatively finer grain structure, the deforming including at least one of rotating

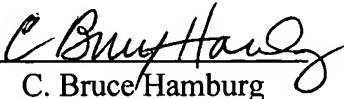
said first region non-low deformation resistance region relative to said second non-low deformation resistance region or displacing, by vibration, said first region non-low deformation resistance region relative to said second non-low deformation resistance region which, among other features recited therein, is not believed disclosed in the cited art in the manner as claimed.

Applicants respectfully request a one (1) month extension of time for responding to the Office Action. Please charge the fee of \$130 for the extension of time to Deposit Account No. 10-1250.

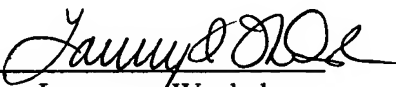
The USPTO is hereby authorized to charge any fee(s) or fee(s) deficiency or credit any excess payment to Deposit Account No. 10-1250.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited.

Respectfully submitted,
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